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THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. IX.] Wednesday, August 14, 1833. [NO. 1.

ON THE FORMATION OF CALLUS.

On the Formation of Callus, and the Mode of Remedying it when diseased or deformed. By Baron Dupuytren.

From the "Leçons Orales," published periodically, under the Baron's inspection.

There is perhaps no subject in pathological anatomy which has more exercised the sagacity of observers, and the imagination of those who raise up hypotheses without experience, than the theory of the formation of callus. Two opinions have chiefly prevailed in modern times—that of Duhamel, and that of Bordenave. The former attributed to the swelling of the periosteum and medullary membrane, to their prolongation from one fragment to the other, and to their ossification, the consolidation of the fracture. He held that this re-union took place, at one time by means of a simple external ferrule, at another by means of a double ferrule, one enveloping the periphery of the fragment, the other penetrating the medullary canal, where it forms a kind of wedge, of greater or less length.

Bordenave established different principles. He admits that the union and consolidation of broken bone takes place by the same mechanism as the healing of soft parts: led, without doubt, to this idea by what happens when the fractured parts are exposed, he thought he could recognise the existence of cellular and vascular granulations between the fragments. According to him, these granulations united and became solid by the deposition of phosphate of lime in their interior. These doctrines, more or less modified, were received down to our time, when in 1808, having undertaken to verify the ideas of Bordenave and Bichat, I was astonished to find nothing which justified them. I multiplied my researches, and was led by numerous experiments to establish a theory partly founded on that of Duhamel, and which I taught in my course of pathological anatomy. Let us trace the most remarkable phenomena which we observe during the time that a fractured bone is becoming consolidated.

If the parts be examined between the first and tenth days, we find an extravasation of blood round the fragments, between them, and in the medullary canal. The ecchymosis may extend to very distant parts. Inflammation and tumefaction to a considerable extent is developed at the irritated points. The fleshy fibres become confounded with the inflamed cellular tissue, and soon cease to be distinguishable from other parts. The periosteum becomes red and swollen, is softened, and pours out a reddish serous fluid between it and the portions of bone which it covers. The medullary tissue becomes tumefied and inflamed, effacing by degrees the canal which the centre of the bone presents. The marrow becomes in some measure fleshy, and unites to that of the opposite side. If we examine what is going on with regard to the fragments, we find the clot which separates them to be absorbed in a few days, and replaced by a gelatinous secretion. From the fourth to the sixth day the surfaces of the fracture are covered with a reddish substance, of a downy appearance, but which is not always present. From the tenth to the twenty-fifth day the tumefaction of the soft parts becomes more solid; its adherence to the intermediate substance of the fragments appears every day more intimate; the muscles resume their wonted aspect and functions. The tumor, which I have called *tumeur du cal*, diminishes in extent, and separates from the surrounding parts; the tissue which composes it is homogeneous, like fibro-cartilage, and difficult to divide. If detached, it is found to consist of fibres parallel to the axis of the fractured bone. The swollen medullary membrane is transformed into fibro-cartilage, and progressively narrows the central cavity of the bone, till it finishes by wholly obliterating it.

In proportion as we advance in the examination of the formation of the callus, we observe other particulars: the process may go on to the twenty-fifth, fortieth, or even sixtieth day. In weakly subjects the work is not completed under three months. The lardaceous and fibrous mass which constitutes the "tumor of the callus," and which entirely envelopes the fragments, becomes by degrees cartilaginous. Towards the end of the time, the fragments are included in the centre of solid ferrule, which adheres to them through the whole extent of the outer surface. Externally this ferrule is covered by thickened periosteum, which passes into that covering the sound portions of the bone. The cellular tissue in the neighborhood is still in a condensed state. The soft substance which was interposed between, in fragments, has now become more dense and more adherent to the extremities of the bone, but is yet far from uniting them in a perfect manner. The central peg continues to be prolonged towards the extremities, rapidly increases in consistence, and soon forms a very solid cylinder of bone. It is usually at this period that the apparatus is removed, but this callus is not yet to remain; consequently, I have named it the "provisional callus," to point out that nature removes it to establish other means of union between the fragments.

From the third to the fifth, even to the sixth month, the tumor of the callus becomes gradually more compact, and the central portion undergoes the same transformation. The substance between the fragments acquires all the characters and consistence of compact bone, differing only in color. It is the transformation of this substance into bone that I have called the "definitive callus." In the concluding period of the formation of callus, the central portion becomes less dense; cells appear in its interior; it is converted into a reticular tissue, which itself finally disappears, and leaves the central canal of the bone perfectly free. The cells are then lined with a medullary membrane. After the establishment of the canal of the bone, it becomes continuous with the lining membrane which secretes the marrow. The external portion of the provisional callus also finishes by disappearing. It is to be understood that the different circumstances of fractures produce some slight varieties in those which attend the callus. Thus, when the fractured bones ride, the interior portion or peg is not found, and the same happens when the bone has no medullary cavity.

To recapitulate:—The re-union of bone generally offers the following phenomena: 1. Effusion of blood and viscid fluid. 2. Ecchymosis in the cellular tissue surrounding the extremities of the fracture. 3. The formation of a cartilaginous and bony ferrule externally, and of a kind of peg within. 4. Ossification of the substance interposed between the fragments. 5. Decrease of the tumor of the callus, and restoration of the medullary canal. The term of forty days, mentioned by many, is far from being sufficient; and where the fracture is oblique, or the bones ride, a much longer time is required.

CASE OF ENLARGED TONGUE.

Abscess and Enlargement of the Tongue, cured by Seton. By William Thompson, M.D., Lisburn, Ireland.

A. J., a delicate-looking boy, ætat. one year and seven months, was admitted into the County of Antrim Infirmary, on the 6th of April, 1832, on account of a large abscess in the substance of the tongue.

The disease had been of some months standing, and an opening had been twice made, prior to his admission, in the under surface of the tongue on the right side, which gave exit to a considerable quantity of thin fœtid pus. The reduction in size of the tongue which took place in consequence, nearly allowed of its being replaced in the mouth, from which it had previously protruded to a great extent. On the closure of the opening, which took place a few days after it had been made, the cavity of the abscess became rapidly distended to a greater degree than at first.

The child's appearance on admission into the Infirmary was frightful; the tongue, enormously enlarged, and protruding from the mouth, was nearly in a state of complete strangulation from the pressure of the teeth; its surface was dry, covered with a brown fur, and intersected here and there with fissures; the nostrils were widely distended, respiration being entirely performed through the nose. Food, in a liquid state, could, with difficulty, be administered, by drawing back the angle of the mouth; the child was, in consequence, very much emaciated.

I immediately made a puncture in the situation of the original opening; a considerable quantity of matter followed, which gave relief, by diminishing the volume of the tongue. Two days afterwards the *argent. nit.* was introduced into the opening, which was beginning to close. This, however, had not the desired effect; the matter collected rapidly, and the tongue again protruded. In order to prevent a fresh accumulation of matter, and at the same time to excite inflammation in the cavity of the abscess, I passed a seton through it, by means of a probe which I introduced at the original opening, and caused to project at the opposite side of the tongue. An incision was then made on it, and the seton drawn through. The ends of the cord were then united to prevent its slipping out.

April 11th. (The seton was introduced on the 9th.) The tongue is now so much reduced in size as to admit of its being retained with ease in the mouth; the quantity of matter cannot be ascertained, as it passes off as it is secreted. A fresh cord was introduced.

April 30th. The tongue being now reduced to its natural state, with scarcely any discharge of matter from the openings, the seton was removed. The child continued to improve in health and strength from this time forward, and was discharged on the 22d of May, cured.

It is now nearly twelve months since the child was discharged, and it still remains free from any return of the disease.

STRUCTURE OF THE PLACENTA.

As the structure of the human placenta has lately excited much inquiry, the following statement was offered for insertion in the London Medical Gazette. It is an account of an examination of the Hunterian preparations relating to this subject, in the museum of the Royal College of Surgeons in London.

The preparation in the Hunterian museum which throws the most light upon the structure of the placenta, and upon the extension of the maternal circulation into it, is marked No. 3535.

The specimen is a triangular portion of a placenta, having a superfices of about four square inches, one of the sides of which is formed by the margin of the placenta, the other two being cut surfaces, the depth of which at the angle at which they meet is an inch and a half. It consists of one entire lobe, and of portions of three other lobes of the placenta. Three kinds of wax injection—one yellow, a second red, a third black—have been thrown into it. The yellow wax, which appears to have been injected last, and more sparingly than the others, is seen to be in the umbilical arteries. The sources and place of the black and of the red injection, with the latter of which the portion of placenta under consideration is most colored, will be pointed out afterwards.

The substance of the placenta is seen to be covered by two layers of decidua, one disposed on its uterine, the other over its fœtal surface: these two layers of decidua meet of course at the circumference of the placenta. Upon one of the cut surfaces of the placenta, productions of the decidua are seen extending through the placenta from the fœtal to the uterine layer of the decidua, which they unite.

Upon the uterine surface of the uterine layer of the decidua are seen orifices of different sizes, some containing red wax, others black wax. Some of these orifices are upon the surface of the lobes, others at the interlobular spaces. The orifices containing red wax open indiscriminately in either situation. The orifices containing black wax open principally at the interlobular spaces. It may be presumed that the orifices containing black wax were continuous with and injected from the uterine veins, and that those which contained red wax were continuous with and injected from the uterine arteries, upon the following grounds:—

The orifices containing black wax are larger, and lead into larger channels, than those which contain red wax. Some of those which contain red wax lead into channels which have the singular tortuous character described by Mr. Hunter, and by others as characterizing the termination of the uterine arteries. And there is a preparation of part of an uterus, in the same series in the gallery, which there can be little doubt is that from which the specimen under consideration was separated, and in which the arteries are injected with red, the veins with black wax.

The orifices upon the uterine surface of the uterine layer of the decidua lead into flattened tubes of greater or less length, which tubes appear to be regular channels, with smooth internal surfaces, formed in the substance of the productions of the decidua. Of these tubes, those which contain red wax are called, in the following description, ***decidual arteries***; those which contain black wax, ***decidual veins***.

One large decidual vein runs along the placental margin of one lobe. Another, of smaller size, passes nearly vertically in an interlobular fissure from the uterine to the fœtal surface of the placenta. The former terminates opposite to an interlobular space at the edge of the placenta in two small decidual veins: one of these smaller veins opens into the extremity of the vertical interlobular vein, just described; the other extends along the fœtal surface of the placenta. A third decidual vein, smaller than either of the preceding, dips into a different interlobular space, and after a course of a quarter of an inch divides into two smaller veins.

Of the decidual arteries, those which open upon the lobules of the placenta make a sudden turn below the uterine layer of the decidua, and terminate there, forming the short curling arteries of Hunter. The interlobular decidual arteries descend nearly vertically towards the fœtal surface of the placenta. One is seen to reach that surface, accompanying an interlobular decidual vein described above. Another, larger than the preceding, passes for the length of half an inch only into an interlobular space.

This preparation, therefore, distinctly establishes that there exist, formed in the decidua, and terminating on or extending into or through the substance of the placenta, regular channels, one class of which is continuous with and receives blood from the uterine arteries, while the other is continuous with and returns blood to the uterine veins.

The manner in which the decidual vessels terminate is best seen in those decidual arteries and veins which enter the substance of the placenta, but do not extend to its fœtal surface. Each of the vessels of this class, that was examined, divides into two branches. These branches, after a short straight course, terminate abruptly. At their abrupt terminations, the tissue of which they are composed appears at more than one point to be porous. The smooth lining of the decidual trunks does not appear entirely divested of the same character. This appearance in the decidual trunks is most distinctly seen in a large interlobular decidual vein. Immediately without and around the tissue in which the vascular channels are formed, is the injected and seemingly cellular decidual tissue of the placenta.

The preparation, No. 3535, would, indeed, leave it in doubt whether the red injection, with which it is colored, is contained in cells, or in a series of minute decidual tubes, comparable to capillaries. But there are four other preparations in the Hunterian museum, seemingly taken from the same subject with that described, and in which the portions of uterus and placenta are not separated. Three of these, Nos. 3539, 3533, and 3538, and especially the first, certainly display a series of cells filled with black injection from the uterine veins. In one of these, numerous openings into cells from the side of a marginal decidual vein are distinctly to be seen.

There are other preparations which, taken singly, are less illustrative; but the whole beautiful series appears to us to establish in the clearest manner the correctness of the views which Hunter entertained of the relation of the maternal to the fœtal circulation in the human placenta.

EDWARD STANLEY.
June 10, 1832. HERBERT MAYO.

CASES OF POISONING BY DATURA STRAMONIUM.

[Communicated for the Boston Medical and Surgical Journal.]

In the winter of 1825 I was called in the night to visit Mrs. S. R., who had been afflicted a few days with a severe cold, but who was suddenly affected on the night of my visit with very distressing and alarming symptoms. I found her in a state of extreme agitation, declaring that she should not live, that she had taken poison which would immediately destroy her life.

She was blind; the pupils were dilated to the utmost extent; her pulse was rapid so as scarcely to be counted, and very feeble. She had puked frequently; complained of pain and vertigo and great confusion in the head, faintness, and indescribable anxiety at the stomach; was extremely restless, not at all disposed to sleep; her skin was cold and covered with sweat; countenance wild, exhibiting excessive anxiety and alarm; and notwithstanding that her friends had made every effort to allay her fears, and satisfy her that she had taken nothing but herb tea, she still insisted that she had taken poison and should die.

Alarmed myself at her singular appearance and symptoms, I inquired of her mother, who was an experienced nurse, what she had taken, and learned that she drank freely of a tea of *coltsfoot* and *liquorice*, the former having been gathered by the mother herself, and carefully labelled, and the latter had the evening previous been procured of an apothecary.

Fearing that some narcotic poison had been accidentally mixed with the ingredients of which the tea was made, I gave an emetic, which operated freely, without affording relief. I then gave her twenty-five drops of laudanum, in a weak brandy sling, every hour till relief was procured; applied mustard paste to her stomach, warmth to her extremities, and gave her freely of warm aromatic drinks. After six hours of the most indescribable distress and phrenzied delirium she fell asleep, and remained in quiet repose for some hours. When she awoke she was calm; so blind as to be unable to distinguish one person from another; pupils of the eyes greatly dilated. She was very thirsty; tongue dry. Vomited frequently through the day. The pulse was frequent and soft.

I was now satisfied that she was under the influence of the stramonium.

As I could gain no information from the apothecary, I examined the bundle of coltsfoot, and found mixed with it a considerable quantity of the leaves of the stramonium, which solved the whole difficulty. The thirst, dilated pupil, and dimness of sight, continued for some days, when my patient gradually recovered.

Case II.—On the morning of the 24th of June, 1825, I was requested to visit Miss E. F., who was represented to be in great distress and furiously deranged. When I arrived about 4 o'clock, she had sunk into a state of complete insensibility, was unable to swallow any fluid, or to be aroused sufficiently to take the least notice of me or her friends. Previous to my arrival, she had been greatly excited and delirious. I found that the pupils were dilated, the skin cold and moist; pulse 120 in a minute, small and soft; her countenance pale, extremities cold, &c. Her mother informed me that being a little unwell, she had given her some lettuce and gold thread tea, which she took very reluctantly. This was taken at 11 o'clock, five hours before my visit.

I immediately directed that compresses be wet in oil of turpentine and applied to her limbs, while covered, so that rapid evaporation could not take place. An injection of the turpentine, with sufficient laudanum to retain it, was thrown up the bowels. Volatiles were applied to the nose, and warmth and friction to the surface, to excite the action of the skin. Not long after this course was adopted, she was suddenly aroused; was highly delirious, nearly blind, thirsty, mouth very dry. Her pulse varied from 110 to 125, very soft and compressible. If she raised her head from the pillow she had vertigo, vomiting and faintness. These symptoms satisfied me that she had taken some narcotic, and probably stramonium. I called for the cup of herb tea which was still standing, and found that stramonium had been used instead of lettuce in making the tea. I gave her brandy and water, and every two hours twenty drops of laudanum, till the extreme restlessness and distress abated; when quiet sleep was restored, all danger was over, and she recovered very gradually.

Case III.—In October, 1825, I was called in great haste to see Mrs. W., aged about 40, who was represented to be in a profound coma, having slept uninterruptedly all the afternoon and evening of that day.

Mrs. W. had just recovered from an attack of dysentery, of which disease two of her daughters were at this time seriously sick. When I visited the daughters in the morning (it was Sunday, and the rest of the family were at church), Mrs. W. informed me that she was seriously afflicted with piles, which had followed her disease and were very painful, and she wished me to prescribe for her. I directed her to take one leaf of the Datura Stramonium as large as three of her fingers, and make a strong infusion and take it as an injection. She prepared the remedy and administered it herself, no member of the family having any knowledge of it. When her husband returned from church, he found her asleep in her bed-room. As she had had little rest during the sickness of her daughters, he was gratified to find her so quietly reposing, and directed that she should not be waked to tea. Before bed-time, however, he became anxious at the length of time that she slept, and attempted to arouse her.

All his efforts were unavailing. She was perfectly comatose. Under these circumstances I was sent for. Recollecting my prescription for her in the morning, I hastened to the house, and inquired if she had taken the injection. No person had any knowledge of it. Search being made, however, a vessel containing a large quantity of the leaves of stramonium was found, from which, as I afterwards learned, nearly a pint of strong infusion had been drained off and taken, as directed, by injection, she not knowing that the plant was poisonous.

Her symptoms were of the most alarming character, and exhibited the operation of that dangerous narcotic to a greater degree than I had ever before seen. She was perfectly insensible, as if dead, unless irritated by the harshest means; her pulse was 120 in a minute, small and soft; pupils fully dilated; tongue flabby and hanging out of the mouth; surface pale and cold; respiration slow and irregular.

I gave her a wineglassful of oil of turpentine by injection, applied mustard and oil of turpentine to the surface; frictions, volatiles, &c.; put into her mouth frequently diluted brandy, spirits of ammonia, and other stimulants. It was many hours before she was effectually aroused. Before morning, by the most persevering efforts, pinching her, stinging with nettles, external heat, internal stimulants and turpentine injections, she revived, and after a while was enabled to tell the story of her proceeding with the stramonium. It was ten or twelve days before she entirely recovered from the symptoms produced by it. The piles were wholly cured, but perhaps the turpentine injections had a share in the cure.

The effect of stramonium upon the pulse is different from that of most narcotics, when pushed so far as to produce *ultimate narcosis*. I have almost universally found it increased in frequency, but not in force.—The utility of *opium* to allay the peculiar distress, irritability and delirium, produced by this and other dangerous narcotics, is illustrated by the following case of poisoning by Cicuta Maculata, as well as by the foregoing.

Miss G., aged 30, had been an invalid two or three years. In the course of her illness she lost her voice to such a degree as to be able only to whisper. At this time she was recommended by a friend to take the root of the Angelica Archangelica for its cure, and a quantity of the root was furnished her by her friend, and such a description was given of the plant as to enable her to procure it when the supply thus furnished should fail her.

Her brother, ignorant of the subject of Botany, took the description and went in search of the plant. Soon he returned with an abundant supply, of which she took the usual quantity. In a very few minutes she felt uneasiness at the stomach, sickness and vertigo. In a short time her distress was extreme; her stomach was in an agony of torment; vertigo increased; blindness followed; dilated pupil; coldness of extremities and of the whole surface of the body, which was covered with sweat, and felt more like marble than like the surface of the body. Her pulse was slow and intermitting. Countenance exhibited excessive anxiety and distress. She had also a most agonizing pain in the limbs, attended by extreme restlessness and jactitation. In a practice of twenty-five years, I have never witnessed an appearance of greater suffering. This had existed some hours previous to my arrival at the house. Sensible that some narcotic had been mistaken for the root intended to be used, I called for a sample. When the root and stalk was brought to me, I found it to be the *Cicuta maculata*, *Water Hemlock*, or *Water Fennel*, so common in the low meadows of New England, and which by some medical men has been mistaken for the *Conium maculatum*, commonly known as Cicuta in the shop of the apothecary.

I gave the young lady immediately an emetic of ipecacuanha, which distressed her exceedingly, and operated repeatedly, without affording any relief whatever. I then gave her fifty minims of laudanum in hot brandy and water, and applied warmth and friction to the surface. In twenty minutes she was entirely relieved of the distressing pain in her limbs. The laudanum was repeated in small and frequent doses through the night. The next day she took a laxative medicine, after which she recovered very gradually; for it was a long time before the system recovered from the effect of so dangerous an experiment, which very nearly cost my patient her life. W.

August 1, 1833.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, AUGUST 14, 1833.

DIFFUSIBLE STIMULI IN CATARRH.

There is no fact more familiar than that catarrh, in the forms in which it most frequently presents itself, is either allowed to subside spontaneously, or, if treated at all, is attacked by a class of substances very different from those ordinarily employed to subdue inflammatory action. The popular remedies consist principally in infusions of vegetable substances, containing an acrid principle, as the mints; or in preparations of diffusible stimuli, well known under the names of wine whey, whisky punch, gin sling, and other varieties suited to the taste of the patient and prescriber; or thirdly, of liquids not very active in themselves, but employed at a high temperature, in virtue of which they produce their effects. The indication which is ordinarily answered by the employment of these substances, is that of producing perspiration; and when this is effected to any considerable extent, the disease is usually relieved without delay. This mode of obtaining a cure under these circumstances, being rather agreeable than otherwise, it naturally happens that most persons affected with catarrh resort to it at least once before applying regularly for medical advice, and thus subjecting themselves to the danger of being forced to make trial of some less palatable dose. The physician, therefore, is seldom applied to in catarrh, until the insufficiency of this mode of treatment has been demonstrated by experience. Of course, the stimulant plan is not very often resorted to by the faculty; and when it is, it generally happens that some more recondite mixtures, as preparations of camphor, opium and ammonia, are substituted for the familiar articles above named. But whatever the particular preparation resorted to, the general fact is still recognized, that in the early stage of catarrh the disease may be speedily removed by heating stimulants, which generally produce evacuation by sweating. It is equally certain, however, that this class of medicines, unless employed in the commencement of the disease, is rarely of service; that if it fail once, a second or a third employment of the same treatment very seldom produces benefit; and that if not attended with advantage, these remedies are very likely to prove positively injurious, and to aggravate, in place of relieving, the symptoms. There would seem, then, to be a certain point in the progress of this peculiar inflammatory affection, previous to which the class of medicines in question prove salutary, but after which they are injurious; or the same fact may be expressed by saying, that according as the disease is variously modified, the same remedies may prove decidedly useful on the one hand, or manifestly disadvantageous on the other. What this point is, or what distinguishes these modifications from each other, is a question of some interest and of no little difficulty. The following is offered with some hesitation as a solution of the problem.

The first stage of catarrh, which in its mildest form constitutes the whole disease, consists in a determination or afflux of blood to the mucous membrane lining the passages of the nose, not unfrequently extending to the supra-orbital sinuses and to the tracheal passage. The state of this membrane may be regarded as one of irritation merely, or a very low degree of inflammation, marked by redness and slight swelling. At the same time the general circulation continues wholly unaffected, or is very moderately accelerated; the appetite, the digestion, the muscular strength, continue almost unimpaired; and the little suffering which is experienced arises from a sense of obstruction in these passages, accompanied with a sort of tickling or itching, and with an increased secretion of the usual fluids. The cause which produces this state of things is very frequently the application of cold air to the skin when heated; but it is not always that this cause can be traced—and even when suspected, the state of the skin itself or of its secretions gives no evidence of disordered function. Many persons, however, find that in this state of things free perspiration is less readily produced by active exercise, than in health.

It is, then, in the degree or kind of catarrhal affection now named, that the employment of warm and stimulating potions, while the body is externally covered, is found to be of especial service. A preparation of this kind, consisting, as we have before said, of wine or spirit and hot water, or any of the mints in infusion, or still more simply of some mild nutritious liquid at a high temperature and taken at bed-time, will carry off the disease and leave the system in health in the course of a few hours. The immediate effect in this case, is to produce free perspiration; and this circumstance, taken in connection with the supposed origin of the disease, suggests the popular explanation that the functions of the skin, before suspended, are restored, and the vicarious discharge from, and the afflux of blood to the mucous membrane, cease in consequence. This may in fact be the true explanation; but as we have no evidence that the skin is always in this morbid state, the theory is too limited for the facts. A more general explanation may be found in the mere transfer of action to the skin, whereby the latter becomes the seat of the afflux, and the system not being capable of maintaining the two processes simultaneously, the affection of the mucous membrane is relieved. It is worthy of remark, however, how complete these cures generally are, and with how little apparent loss of power to the general system they are effected. Even the danger of taking cold a second time, or inducing a new catarrh by fresh exposure, though the prevalent apprehension of it seems perfectly consonant to reason, is rarely realized.

But it is unquestionable that there are other stages and states of catarrhal affection, in which the exhibition of remedies such as we have described is attended with an effect on the disease the reverse of that to which we have alluded; when by it the sense of oppression and tightness is increased, the inflammation of the membrane aggravated, the pain rendered intolerable, and the skin hot, dry and harsh. It would seem, then, that in this case the affection had reached a point at which the system had no longer power to discharge the morbid humor through the same channel. In other words, it would appear that the determination to the mucous membrane had become the unalterable purpose of the system, and that the activity developed by the stimulus, in place of being directed as before, to the skin, went entirely to augment the existing affection; that the afflux, instead of so much deducted from the disease, became to that degree an addition to its intensity. What is the nature of the morbid change on which depends this difference in the action of remedies? Is it dependent on the greater amount of a mere febrile action, or on its diffusion over a wider extent of surface? The latter opinion is adopted and ingeniously maintained by the writer of an article in a number of the Dublin Journal, Dr. Corrigan. This author supposes that it is the diffusion of the inflammatory action over the surfaces of the ramifications of the bronchial tubes, which forms that stage of the disease at which stimuli serve only to aggravate, in place of relieving it. This change in the seat of the disease, according to Dr. C. is accompanied by a distinct and sufficiently obvious symptom, viz. a wheezing sound in the respiration, perceived by mediate or immediate auscultation under the clavicle. The presence or absence of this wheezing sound, Dr. C. considers to be a sufficient guide in determining the practitioner whether the disease has already reached that point at which the stimulating substances alluded to would be injurious, or whether opportunity still remains open for their successful exhibition.

We shall not enter particularly into the merits of this theory, which professes to be founded on a careful induction from facts, and which seems in itself sufficiently plausible. But we imagine that practitioners generally, in deciding on the propriety of antiphlogistic remedies in catarrh, are influenced more by the evidence of the developement of positive inflammation, with a quickened pulse and a hot skin, than by that of the mere extension of the disease over a wide surface of mucous membrane. As respects the stage of the disease, if the inflammation has proceeded to such an extent as to render suppuration inevitable, or if this has already commenced, it is not difficult to understand why an attempt to divert the action elsewhere should be vain and futile. As well might we attempt to arrest the progress of a phlegmonous inflammation, after the matter had been secreted and the abscess formed. The existence of fever, manifested by increased rapidity of circulation and the other usual symptoms, would seem also to forbid the administration of stimuli, the primary effect of which is to produce this very effect on the system, and thus to aggravate a leading cause of the suffering. The last view of the subject leads to this peculiar inference, which seems to be sufficiently in accordance with our experience, that although the particular mode of determining to the surface, already referred to, by producing primarily a universal stimulus, is limited in its application to the commencing stage of the disease, other modes not involving this necessity can be resorted to at a later period, with the prospect of a speedy and permanent relief. The utility of the warm bath, when catarrh co-exists with general fever, amply confirms this idea.

In conclusion, then, we may consider as established the following principle : that in the primary stage of catarrh, before the commencement of any sensible affection of the general system, while the affection of the mucous membrane is irritative merely, and before the smaller passages are involved in the disease, the use of stimulant remedies is admissible ; and that when under these circumstances these remedies produce relief, their immediate effect seems to be to cause determination to the external surface, and thus produce a metastasis of the morbid affection.

PHYSIC BEYOND THE MOUNTAINS.

The Profession cannot but regard with high satisfaction the spirit of enterprise and improvement that prevails among those of our brethren whose lot has fallen to them in the beautiful regions of the west. The guardians of the public health are vigilant, and the means of investigating and curing the diseases of the country, and its resources in the Materia

Medica, engage the attention and the interest of many as talented and spirited men as are found in any part of the Union. But the profession there as elsewhere need the countenance and aid of the people. It is a singular fact, that in all ages and countries the medical faculty have found it difficult to persuade the people to adopt measures that are expressly, exclusively, and directly for the good of the community ; and it is equally remarkable that physicians have persevered in urging such measures on public bodies and on individuals, though in direct opposition to the pecuniary interests of the practitioners themselves. Instance the zeal which has every where been manifested to procure the legalization of the study of anatomy. As medical practitioners, we have no manner of interest in this matter. On the other hand, there is no doubt that diseases would last longer and be much more frequent if we, as a body, knew less of the structure of the human frame. It is equally certain that the more accurate this knowledge is, the greater will be the success of the faculty in directing the means of preventing and curing diseases among the people. Yet time and labor, argument on argument, explanation and illustration, talking, writing, speech-making and lecturing, the employment of individual influence, and the conciliation of public assemblies, have all been employed again and again, year after year, before the necessary means of acquiring such knowledge would be allowed by the people's representatives ; and employed too by medical men, who, though directly opposed to their own interests, have uniformly, and in all countries and at all times, manifested a zeal and perseverance in the matter, for which they have never received even the credit of disinterestedness.

The constant endeavors of the faculty to promote the general practice of vaccination is another example of the disinterested zeal by which the profession is animated. Who can calculate the immense amount of disease that is prevented by this simple process—disease that physicians would be constantly employed in managing ; and yet how hard have they to labor to *persuade* the people to adopt this wonderful prophylactic. In the western States, more perhaps than in any other part of the Union, the people lie open to attacks of the smallpox—for vaccination is much more commonly neglected there than in the older sections of the country. But on this subject the profession are awake, and attempts are now making to ensure the general protection of the people by recommending a law by which no child shall be admitted to a free school unless previously vaccinated ; and in order to make the protection more extensive, it is proposed that the law shall not take effect until six months after its passage, when all the children then in the schools shall be required to show evidence of having received this protection, or excluded from the benefits of gratuitous education. The plan is so excellent that it must meet with the approbation of the public bodies whose duty calls them to act upon it. It has been in full operation in this city, for the last three or four years, and is found to answer very effectually the purpose for which it is designed, and to operate quietly, but uniformly and agreeably, on all the poorer classes of the community, for whose benefit it was chiefly intended. We trust and believe that it will be adopted and found equally salutary beyond the mountains; but whether it be carried into immediate operation there or not, the high-minded men who are urging it forward will never rest till their benevolent purposes are accomplished.

The medical school connected with the Transylvania University maintains a high rank, and receives a fair patronage from the surrounding country. At the last public commencement, 67 young men received the degree of M.D., and the school numbers, among its professors, individuals of eminent ability and learning. A quarterly Journal of Medicine is also published at Lexington, the principal writer in which is the author of the Prize Essay on Fever, published in the third volume of this Journal. The pen of this vigorous writer is recognized in a late and incomparable review, in the Transylvania Journal, of Dr. Jackson's work on the Principles of Medicine.

In addition to these medical advantages, a course of lectures on anatomy is to be delivered there by Dr. J. N. M'Dowell, who has recently removed with a valuable anatomical museum from Cincinnati. This gentleman is said to be clear, energetic, and fluent as a lecturer, and remarkably familiar with the subjects he undertakes to illustrate. His father, the late Dr. E. M'Dowell of Danville, Ky., is said to have been the first surgeon in this country who performed the hazardous operation of extracting a diseased ovary, and he was for many years the only lithotomist in the Valley of the Mississippi. The number of surgeons in the western States who rank lithotomy among their operations is rapidly increasing, and our readers will remember that a native of Kentucky was the first American pupil of Civiale.

The Medical College of Ohio has not sustained very uniformly the reputation which it has at times possessed. The changes that have taken place in its faculty have created some disturbance, and cannot fail to be a serious injury to the Institution, whether viewed in its relation to the community or its internal management. There are at present some difficulties in the college, the precise nature of which we do not fully understand; but we are happy to learn that they are in a fair way to a speedy adjustment. The medical class that last graduated at this college consisted of 19.

Of the Western Journal of the Medical and Physical Sciences, and the Western Medical Gazette, we have several times had occasion to speak in terms of commendation. Both these periodicals, the one a quarterly and the other a semi-monthly, are published at Cincinnati. From the former we have chiefly derived our information, from time to time, of the progress in the Medical Sciences in the west. It has relapsed of late into the charge of its former able and spirited editor, Dr. Drake, and promises to be still more replete than ever with evidence of the talent and enterprise of the faculty in the western States. We close these few notices with the following extract from the remarks of Dr. D. on re-assuming the editorial charge of this periodical.

The Western Journal is the oldest medical, scientific, or literary periodical in the Valley of the Mississippi, except newspapers. It has struggled through various difficulties, and fallen successively into the hands of several publishers. Its projector and original Editor has been aided, at different times, by two assistants; though at one period, to preserve its very existence, he alone was both editor and publisher. His last coadjutor was Dr. Finley, whose withdrawal must be regretted by every reader of the Journal. All these changes were, perhaps, in some degree inseparable from such an undertaking in a new country. But the Editor has, as he believes, good reason for anticipating a firmer and happier progress for the Journal hereafter, than that which it has passed through. He does not expect it to change publishers so often as heretofore; he hopes to see it issued with more punctuality, and flatters himself that a greater number of the respectable physicians of the West will hereafter inscribe on its pages the results of their experience.

To the East he does not venture to look either for patronage or professional contribution. The Journal has never, yet, had a dozen subscribers east of the mountains, nor have half that number of his eastern brethren contributed to its pages! In Philadelphia, the seat of his *alma mater* and the emporium of the medical sciences, for some time the only subscriber was the public-spirited *Matthew Carey, Esq.*; and when the learned Dr. Bell, of that city, was writing the Treatise on Mineral Waters and Baths, which was lately commended to the readers of this miscellany, he could not find a copy of it in the whole of that great city, from which to transcribe the history of the principal mineral springs of Kentucky and Ohio.

The Editor notes these facts, as items in the history of western medical literature; and may add, that the periodical press of the Eastern States has seldom taken the slightest notice of his Back-woods enterprize; although, with all its imperfections, it has received sufficient Back-woods patronage to live for a longer period than a majority of the medical journals that have shot forth in the East.

It will be the duty, as it is the desire and design, of the original, now the sole editor, to devote to it more time and attention than he has heretofore done; and aided by such of his public and private pupils, scattered over the Valley of the Mississippi, as cultivate the profession, *con amore*, he hopes to render the second Hexade, in all respects, superior to the first.

The plan of the work, admitting of Original Communications, Reviews, and Miscellaneous Intelligence—analectic, analytical and original—has been devised, as best adapted to the dissemination of every kind of professional information, and fitted to render the work *E sylvis, æque atque ad sylvas, nuncius.*

Preparation of Chlorine in Scarlet Fever.—Having just read Dr. Alexander's second paper in the Lancet for February 23d, with much interest, I beg to mention, with all due deference to Dr. Alexander, that in the typhoid form of scarlatina, where the Doctor points out the necessity of "bark, wine, and various tonics," I have lately, in addition to the above remedies, prescribed, with astonishing benefit, the following preparations of chlorine :—R. Potassæ oxymur. ʒij. Acidi muriatici ; Aq. dist. āā ℥ij ; solve, ut ft. mistura, cujus capiat Pharmacopula quantitatem infra dictum, ad misturam sumendum. R. Misturæ ut supra, ʒij ; Aq. distillatæ vel Alius aq. dist. ℥vj. Ft. mist. cujus capiat partem 4tam, 4ta quaq horâ.

If the term "specific" may be allowed in the nomenclature of "licensed practitioners," this medicine may claim it. I have also administered this medicine per anum, and by its powerful disinfecting properties have found it cleanse the bowels from the putrescent diarrhœal discharges so irritating and distressing to the patient.

As I have no wish to arrogate to myself the credit of this discovery, I beg leave to state, that some years ago it was brought to my notice by Mr. Brown, an intelligent practitioner at Lewisham in Kent ; therefore, "Palmam qui meruit ferat." My object in bringing the fact before the medical public is, that my professional brethren may give it a trial, and, if successfully, their meed of praise.

I have the honor to be, Sir, yours very respectfully,

London Lancet. JAMES BRIGHT.

Poisoning by Sulphuric Acid.—A man swallowed two ounces of sulphuric acid ; and, strange to say, the pain at the epigastrium was very inconsiderable, although all the other symptoms of poisoning from such a virulent agent were strongly marked.—*Gaz. Med.*

Subscribers to the Medical Journal, whose names were sent in subsequent to the commencement of Vol. VIII., and who have not received the preceding numbers, are informed that a few complete sets of Vols. VII. and VIII. remain on hand, which can be forwarded to them in sheets by mail, if desired.—The Title-page and Index to Vol. VIII. will be forwarded in an early number.

Whole number of deaths in Boston for the week ending August 10, 25. Males, 15—Females, 10. Of drowned, 1—hooping cough, 1—intemperance, 3—scarlet fever, 1—accidental, 1—old age, 2—scalded, 1—abscess, 1—unknown, 2—consumption, 4—teething, 1—cholera infantum, 1—inflammation of the bowels, 1—inflammation in the head, 1—infantile, 2—croup, 1—decline, 1.

ADVERTISEMENTS.

HARVARD UNIVERSITY.

MEDICAL LECTURES.

THE MEDICAL LECTURES in HARVARD UNIVERSITY will begin in the Massachusetts Medical College, Mason Street, Boston, the *third Wednesday in October next*, at a quarter before nine, A. M., and continue four months.

Anatomy and Surgery, DR. WARREN.
Chemistry, DR. WEBSTER.
Materia Medica, DR. BIGELOW.
Midwifery and Medical Jurisprudence, DR. CHANNING.
Theory and Practice of Physic, { DR. JACKSON, DR. WARE.

WALTER CHANNING, *Dean.*

Boston, May 15, 1833. 1aft

THE BOSTON MEDICAL AND SURGICAL JOURNAL
IS PRINTED AND PUBLISHED EVERY WEDNESDAY, BY D. CLAPP, JR. AND CO.
At 184 Washington Street, corner of Franklin Street, to whom all communications must be addressed, *Post-paid.* It is also published in Monthly Parts, on the 1st of each month, each Part containing the numbers of the preceding month, stitched in a cover.—Price $3,00 per annum in advance, $3,50 if not paid within six months, and $4,00 if not paid within the year.—*Postage the same as for a newspaper.*